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CONLEY, O'K				
ART UNIT		PAPER NUMBER		
1795				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary

Application No.

10/542,712

Applicant(s)

ERHARDT ET AL.

Examiner

HELEN O.K. CONLEY

Art Unit

1795

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-16 is/are pending in the application.
- 4a) Of the above claim(s) 8,11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-7,9,10,13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicants' amendments have been received on 1/11/10. Claims 1, 3, 5, 13, 14, 16 have been amended. Claims 2, 4, 17-22 have been cancelled.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action.

Claim Objections

3. Claim 14, 16 are objected to because of the following informalities: please add "a" in between "is" and "coated". Appropriate correction is required.

Claims Analysis

4. It is noted that claims 1, 3, 5-7, 9-10, 13-16 are product-by-process claims such as "coated" and "uncoated". "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Since electrode and film is the same as to that of the Applicant's, Applicant's process is not given patentable weight in this claim.
5. It is noted that claims 1, 3, 5, 6, 7, 9, 10, 13, 14 have "intended use" language such as "for use with an electrochemical cell having a liquid electrolyte," and capable of holding the liquid electrolyte," and it has been held that a recitation with respect to the

manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Claim Rejections - 35 USC § 102

6. The rejections under 35 U.S.C 102(b) as being anticipated by Newcomb on claims 1, 3, 14-16 are maintained in addition to rejections made under 35 U.S.C 103 to address the product by process claims (Please see MPEP 2113). The rejection is further clarified below for convenience.
7. The rejections under 35 U.S.C 102(b) as being anticipated by Newcomb on claims 2, 4, 5 are withdrawn because the Applicants amended or cancelled the claims.
8. The rejections under 35 U.S.C 102(b) as being anticipated by Newcomb on claims 1, 3, 6, 7, 9, 10, 14-16 are maintained in addition to rejections made under 35 U.S.C 103 to address the product by process claims (Please see MPEP 2113).. The rejection is further clarified below for convenience.
9. The rejections under 35 U.S.C 102(b) as being anticipated by Newcomb on claims 2, 4 are withdrawn because the Applicants amended or cancelled the claims.

Claim Rejections - 35 USC § 103/102

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 3, 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by, or in alternative, under 35 U.S.C 103(a) as unpatentable over Newcomb (US Patent 4,348,712).

Regarding claims 1, 3, the Newcomb reference discloses an electrode for use with an electrochemical cell having dielectric fluids (Applicants' liquid electrolyte). The electrode further comprises a coated film of propylene or Hazy film that comprising high degrees of surface irregularities with peaks and valleys (Applicants' channels; 3:45-60) that are capable of holding the dielectric fluids (1:45-55). The film being on a surface of the electrode (Fig. 1; 2:25-30 and Figs. 6-10). The channels are grooves on the surface of the electrode (2:25-30)

Furthermore, it is noted that claims 1, 3 are product-by-process claims such as "coated". "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Since electrode and film is the same as to that of the Applicant's, Applicant's process is not given patentable weight in this claim.

Regarding claim 14, the Newcomb reference discloses multiple layers of electrodes positioned one on top of another and the multiple layers comprises channels that are capable of holding liquid electrolyte (Fig. 6)

Regarding claim 15, the Newcomb reference discloses an electrode roll wherein the multiple layers comprise two electrodes (fig. 6) wound together (fig. 1).

Regarding claim 16, the Newcomb reference discloses an electrochemical cell comprising a liquid electrolyte and multiple layers of electrodes (Fig. 6) positioned one on top of the other (Fig. 1) and wherein the multiple layers comprises channels that hold the liquid (3:50-60).

Furthermore, it is noted that claims 14 and 16 are product-by-process claims such as "coated". "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Since electrode and film is the same as to that of the Applicant's, Applicant's process is not given patentable weight in this claim.

12. Claims 1, 3, 5, 6, 7, 9, 10, 14-16 rejected under 35 U.S.C. 102(b) as being anticipated by, or in alternative, under 35 U.S.C 103(a) as unpatentable over Chapman (US Patent 4,439,812).

Regarding claims 1 and 3, the Chapman reference discloses an electrode. The electrode comprises a polypropylene film on metal foil. The metal foil comprises channels on the surface of the electrode (1:45-55) and capable of holding the dielectric fluids (2:5-20).

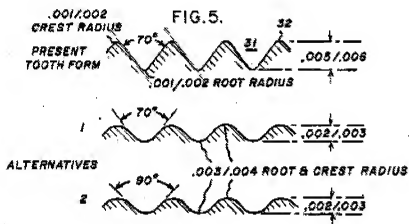
Furthermore, it is noted that claims 1, 3, 5-7, 9, 10, 14-16 are product-by-process claims such as "coated". "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Since electrode and film is the same as to that of the Applicant's, Applicant's process is not given patentable weight in this claim.

Regarding claim 5, the Chapman reference discloses the metal foil channels are filled with dielectric fluids in which the foil electrode strips have line embossed surfaces to stabilize a spaced relationship from adjacent surfaces as compared to the tight synthetic resin and metal foil form of the previous inventions (1:1-30).

Regarding claim 6, the Chapman reference discloses that at least one of the channels are have a width between 0.1mm to 1mm (Claim 3 and claim 4)

Regarding claim 7, the Chapman reference discloses the channels have a depth of between 10 microns to 200 microns (3:30-35).

Regarding claim 9, the Chapman reference discloses that the channels comprises substantially straight lines that are substantially parallel to one another and that have substantially same lengths (Fig. 5 denoted by the red dotted line below, 3:55-65)



Regarding claim 10, the Chapman reference discloses the electrode extends along a longitudinal direction (1:40-50) and wherein the channels run substantially diagonal to the longitudinal direction (2:62-63)

Regarding claim 14, the Chapman reference discloses multiple layers of electrode positioned one on top of another and the multiple layers of metal foil with a polypropylene film. The metal foiled comprises channels that are capable of holding liquid electrolyte (Fig. 1)

Regarding claim 15, the Chapman reference discloses an electrode roll wherein the multiple layers comprise two electrodes wound together (fig. 1).

Regarding claim 16, the Chapman reference discloses an electrochemical cell comprising a liquid electrolyte and multiple layers of electrodes positioned one on top of the other (Fig. 1) and wherein the multiple layers comprises polypropylene film on metal foil. The metal foil comprising channels that hold the liquid (1:45-55)

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Newcomb (US Patent 4,348,712) in view of Andelman (US Patent 5,547,581).

The Newcomb reference discloses the claimed invention above and further incorporated herein. The Newcomb reference discloses the electrodes further comprises a metal foil with propylene film over the metal film, however, the Newcomb reference is silent in disclosing that the metal film comprises a carbon powder coating on the metal films, however, the Andelman reference discloses the electrodes of high surface area may comprise electrical conductivity enhancing additives such as activated carbon coated particles (3:45-50). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate additives such as activated carbon coated particles as an additive for a capacitor electrode as disclosed by Andelman onto the metallic capacitor electrode as disclosed by the

Newcomb reference in order to increase capacitance and enhance properties of the capacitor.

15. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman (US Patent 4,439,812) in view of Andelman (US Patent 5,547,581).

The Chapman reference discloses the claimed invention above and further incorporated herein. The Chapman reference discloses the electrodes to be metallic but is silent pertaining a carbon powder coating on the metal films, however, the Andelman reference discloses the electrodes of high surface area may comprise electrical conductivity enhancing additives such as activated carbon coated particles (3:45-50). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate additives such as activated carbon coated particles as an additive for a capacitor electrode as disclosed by Andelman onto the metallic capacitor electrode as disclosed by the Chapman reference in order to increase capacitance and enhance properties of the capacitor.

Response to Arguments

16. Applicant's arguments filed 1/11/10 have been fully considered but they are not persuasive.

a. Applicants argue, *"In this regard, Newcomb describes a capacitor containing embossed electrodes. As shown in its Figs. 6 to 10 below, an electrode includes "a pair of patterned or dimpled foils 34 and 35".*

As described in Newcomb, these patterns are embossed or raised in the foil itself. They are not a coated film containing channels. In this regard, the Office Action contends that the "hazy film" used in Newcomb constitutes evidence of "a film that defines the channels". However, as shown above, hazy film strips 36, 37 are not a coated film on a surface of an electrode, as required by claim 1." However, as rejected above the Hazy films comprises "peaks and valleys" and "which would give high space factor with high impregnability" (3:45-60); these are dielectric channel formations. Furthermore, the Applicants' arguments pertaining to "they are not coated film containing channels" are unfounded. First, the limitation "coated" is a product-by-process limitation which was addressed above and in MPEP 2113. Figs. 6-10 illustrate the electrode components spaced apart in order to properly identify the different components within the capacitor. In Fig. 1, the relationships of the components are taught. Fig. 1 illustrates that the components of the capacitor have less spaces in between Fig. 6-10 and therefore the components are on each other which includes the propylene film on the metal foil

b. Applicants argue, "Chapman likewise is not understood to disclose or to suggest a coated film on a surface of an electrode that contains channels for holding liquid electrolyte. Rather, Chapman, like Newcomb, describes channels that are formed by embossing or indenting a foil, as shown in Fig. 5 below. For example, in column 3, line 15, the patentee describes using an indenting tool to form the flutes or channels in foil. The Office Action contends that the Fig. 1

shows evidence of "a film that defines the channels".² However, the resin film strips of Fig. 1 are among electrodes, and are not a coated film on a surface of an electrode, as required by claim 1" Again, it appears the Applicants are arguing product-by-process including "coated". Please see MPEP 2113 for product-by-process claims

c. Applicants argue claims 14 and 16 for the same reasons of claim 1 which was addressed above and will not be addressed herein.

d. Applicants argue, *"Thus, while Andelman does describe coated particles, it does not disclose or suggest a coated film that contains channels and that is on a surface of an electrode, much less that the coated film comprises a metal film coated with carbon powder.*

Remaining dependent claims are also believed to define patentable features. Each dependent claim partakes of the novelty of its corresponding independent claim and, as such, has not been discussed specifically herein"
Again, it appears the Applicants are arguing product by process limitation "coated" Please refer to MPEP 2113.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELEN O.K. CONLEY whose telephone number is (571)272-5162. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Helen O.K. Chu/
Examiner, Art Unit 1795

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795